

Memorandum

To: Panel Members Date: December 19, 2002

From: Creighton Chan, Manager
Peter DeMauro, General Counsel Analyst: D. Woodside

Subject: One-Step Agreement for **Tyco Thermal Controls LLC**
(www.tycothermal.com)

CONTRACTOR:

- Training Project Profile: Retraining companies with out-of-state competition
- Legislative Priorities: Promotion of California's Manufacturing Workforce
Stimulating Imports/Exports
Moving to a High Performance Workplace
- Type of Industry: Manufacturing
- Repeat Contractor: No
- Contractor's Full Time Employees:
 - Company Wide: 120,000 (Parent Company: Tyco International Ltd.)
 - In California: 260
- Fringe Benefits: Yes
- Union Representation: No
- Name and Local Number of Union representing workers to be Trained: N/A

CONTRACT:

- Program Costs: \$259,311
- Substantial Contribution: \$0
- Total ETP Funding: \$259,311
- In-Kind Contribution: \$403,800
- Reimbursement Method: Fixed-Fee
- County(ies) Served: San Mateo

- Duration of Agreement: 24 months

SUBCONTRACTORS:

- Computer Magic Training (San Jose, California) for an amount to be determined for Computer Skills training; and
- TJ Training & Consulting (Pleasanton, California) for an amount to be determined for Manufacturing and Business Skills training.

The Contractor intends to use primarily in-house trainers, but may need to hire additional external California-based training vendors in the future. The company must notify its monitoring analyst and have a subagreement with any training vendor on file prior to the start of training by that vendor.

THIRD PARTY SERVICES:

None

NARRATIVE:

In accordance with Title 22, California Code of Regulations Section 4416(b), Tyco Thermal Control LLC is eligible for ETP funding because it is a manufacturer.

Tyco Thermal Controls (TTC) is a producer of heat tracing products, self-regulating heaters, related software and components found in thermal control systems used by the oil and gas, chemical, power generation, manufacturing, pharmaceutical, and commercial construction industries, to name a few. This project will serve frontline workers at the company's Redwood City facility, which primarily produces 17 different insulated cables used in a variety of TTC products for wiring, heating, and temperature control under all types of conditions. For instance, TTC cable and accessories would be attached to an oil pipeline to trace and control heat along its entire length. The Redwood City facility was originally owned by Raychem Corporation, which was founded in 1957. In 1999 Raychem Corporation was acquired by Tyco International Ltd. As a result of the Tyco acquisition, the Redwood City facility became Tyco Thermal Controls. The plant currently employs 260 California workers on a full-time basis.

In order for the Redwood City plant to remain competitive, the company realizes that it must improve productivity and quality without significantly increasing production costs. One way of achieving these goals is to implement a high performance workplace that relies on the frontline worker to be directly involved in process improvement efforts. To facilitate this new way of doing business, an extensive retraining effort must be undertaken. Thus, Tyco Thermal Controls is requesting funds to retrain 109 frontline workers, supervisors, and managers in Manufacturing, Business, Continuous Improvement, and Computer Skills.

NARRATIVE: (continued)

Manufacturing Skills: The primary objective of this training is to cross-train production employees, called operations associates and technicians, to provide skill sets in the four major production processes: braiding, extruding, printing, and the sparking process. This training will provide in-depth knowledge of each process and enhance the knowledge base of operations associates to include the ability to troubleshoot various production machines. The goal of this training is to reduce scrap, down time and production costs. Key frontline workers and managers/supervisors will become qualified trainers as a result of the train-the-trainer course, and will be able to conduct the process training and certification of less experienced production employees. Currently, 38 percent of the frontline workers and managers targeted for the training became employed with the company after the Tyco acquisition in 1999. Another 40 percent of the employees have been with the company more than 10 years. Due to this spread of years, there is a process knowledge gap that will be bridged through the ETP training program. The ETP-funded training will standardize performance and provide each trainee with an array of manufacturing skills that allows trainees to perform effectively throughout the production facility. With a more skilled and flexible workforce, TTC will be more cost-effective and maintain its competitive edge.

Business Skills training will provide administrative associates and managers/supervisors with an opportunity to better understand all areas of the business, including product knowledge, the industry, and the marketplace. As a result, trainees will learn how individual job performance can have a direct impact on company performance. The math metrics and financial skills training will provide more in-depth knowledge of the language of TTC's business and how to measure performance in a quantitative manner. The communication, business writing, and presentation skills training will equip frontline employees with the interpersonal skills and knowledge to work effectively in high performance work teams. The Train-the-Trainer courses will create a core group of expert in-house trainers who can provide ongoing training to production employees during the ETP program and into the future.

Continuous Improvement will be provided to all trainees and will implement a systematic approach to solving process problems and serve as means for frontline workers to become more involved in the decision-making process in a team environment. Prior to this program, continuous improvement efforts have primarily been the responsibility of engineering and maintenance staff. ETP-funded training will give workers an understanding of the quality management system and its company-wide impact. The elements of effective teamwork, the theory of constraints (a process change method for the production environment), and changes in quality standards and requirements will be covered. The company plans to provide continuous improvement training to all of its employees. Those employees not included in the ETP training plan will be trained at the company's own expense.

Computer Skills training will retrain all trainees, including production employees. As TTC's manufacturing processes become more computerized, many frontline workers must be retrained because they possess minimal computer skills. This training will teach them to use Microsoft Office, learn how to communicate through e-mail, and become more familiar with the company's Intranet system. Trainees will also learn to use the company's various computer software applications to create team metrics, generate manufacturing variances and production reports, and develop presentations.

No structured, on-site training will be funded under this Agreement. Tyco Thermal Controls will conduct its own administration.

NARRATIVE: (continued)

Supplemental Nature of Training

Training at Tyco Thermal Control's Redwood City plant is currently provided on an infrequent and as needed basis. Basic production training on how to do a specific job and to operate equipment properly has been learned through on-the-job training. An operations associate typically specializes in one process. With ETP funding, operations associates will be cross-trained in more than one process. Cross-training has been minimal prior to this training program. Ongoing classroom and on-the-job training includes new-hire orientation, safety training, training to prevent sexual harassment and violence in the workplace, and computer, supervisory and management training on an infrequent basis. In addition, TTC provides tuition reimbursement to further employee education and pays for employees to participate in job specific seminars. Company-sponsored training expenditures for employees at the Redwood City facility are approximately \$83,000 per year, and the company is committed to maintaining its ongoing training program.

With ETP funds, the company will be able to provide highly structured Manufacturing Skills training in a classroom and laboratory environment. Without Panel funds, the company would not be able to provide 200 hours of class/lab hours per worker to 90 operations associates. The company representative states that the 200 hours will be possible during the months of March through July when production is lower and there are more opportunities to release employees for training. The Manufacturing Skills class/lab training has never been done before, and, since employees are away from the production floor, results in significant costs to the company.

In-Kind Contribution

Tyco Thermal Controls will defray \$403,800 in wages paid to ETP trainees while they attend training.

COMMENTS:

All participants in this project meet the Panel definition of frontline worker under Title 22 California Code of Regulations, Section 4400 (ee) except for the 10 Managers/Supervisors.

PROPOSED ACTION:

Staff recommends that the Panel approve this Agreement if funds are available and the project meets Panel priorities. This recommendation is based upon the company's stated goal to increase quality in its manufacturing operations, enhance productivity, and improve overall company performance. The high performance workforce retraining outlined in this agreement will also contribute to the long-term job security of the company's California workforce.

TRAINING PLAN:

Grp/Trainee Type	Types of Training	No. Retain	No. Class/Lab Videocnf. Hrs	No. CBT Hrs	No. SOST Hrs.	Cost per Trainee	Hourly Wage after 90 days
Job Number 1 Retrainees	Menu Curriculum: Manufacturing Skills Continuous Improvement Business Skills Computer Skills	109	40 – 200	0	0	\$520 - \$2,600	*\$11.98 – \$40.86
					<u>Range of Hourly Wages</u> *\$11.98 - \$40.86		
					<u>Prevalent Hourly Wage</u> \$18.00		
					<u>Average Cost per Trainee</u> \$2,379		
<u>Health Benefit used to meet ETP minimum wage:</u> *Health benefits of \$.43 - \$1.10 per hour may be added to the base wage of \$11.55 to meet the ETP minimum wage of \$11.98 per hour for San Mateo County.					<u>Turnover Rate</u> 8%	<u>% of Mgrs & Supervisors to be trained:</u> 9%	

Hours
Class/Lab
40-200

Trainees will receive any of the following:

Business Skills

Math Metrics

Understanding the numbering system, fractions, decimals, positive and negative numbers, rounding-off rules, basic understanding of algebraic equations.

Financial Skills / Financial Management/Free Cash Flow/Return on Working Capital

- Understanding the budgeting process
- Budgeting revenues and expenses more accurately
- Working with commonly used budgeting systems.
- Measuring departmental performance against the budget.
- Understanding the cash flow implications of budgeting.

Tyco Thermal Controls Product Knowledge, Industry and Markets

This course will give the participant an overview of the products made by Tyco Thermal Controls (Introduction to Heat Tracing, Industrial Products, Pipe Design, Control and Monitoring, TraceCalc Software, MoniTrace Systems). Both classroom instruction and hands-on demonstration/practicum are included. Hands-on instruction includes working with Heat Tracing, MoniTrace Systems, and troubleshooting the final installation project.

Effectively Communicating with Others

Participants will learn to: Understand the four major factors in effective communication. State what is necessary to be a good listener. Recognize and use non-verbal behaviors, which are consistent with the intended message. Use questioning skills to draw out what the speaker is saying and why they are saying it. Use paraphrasing to verify their understanding of the message. Use I messages to communicate their ideas, feelings and opinions. Disagree with an idea or behavior appropriately. Provide positive feedback that is meaningful.

Effective Presentation Skills

Design presentations geared to audience needs.
Deliver presentations with conviction and impact.
Create visual aids and successfully use them.
Understand performance anxiety and how to build confidence and poise.
Summarize with clarity and conviction.
Persuade the listeners to take action.

Business Writing

Understanding modern English usage. Building your vocabulary for greater word power. Comprehending the rules of structure and grammar. Learning the use of pronouns, adjectives, adverbs, prepositions and articles. Capitalization and writing numbers. Building better sentences. Writing with greater ease, clarity and precision. Developing proofreading and editing skills. Writing letters and business reports, reading work orders, safety regulation as and other documents, language comprehension, understanding verbal directions and instructions.

Training the Trainer

A classroom course for all employees who will be conducting OJT who must complete this training and demonstrate the ability to apply the principles. The training will cover the following topics:

- Principles of Adult Learning
- Giving clear and accurate instruction
- Monitoring a trainees performance
- Active listening and effective questioning
- Providing constructive feedback

Computer Skills Training**Microsoft Excel 2000 Level I Beginning**

Create simple spreadsheets, then format numbers and text, rows and columns. Utilize borders and shading, fonts and alignment for greater impact and clarity. Learn how to copy, move, insert, delete and sort data. Use the new ListAutoFill to copy formatting and formulas to new rows. Insert functions and utilize basic formulas. Set up a new database and create simple charts. Excel 2000's enhanced features.

Microsoft Excel 2000 Level II Intermediate

Expand spreadsheet skills by using powerful functions like Sum, Average, Minimum, Maximum, and Goal Seek. Work with relative and absolute references. Link multiple worksheets, split screens, freeze panes and print titles. Create timesaving macros. Build professional-looking charts and graphs.

Microsoft Excel 2000/XP Level III Advanced

Learn advanced Excel concepts to expand your career. Create styles, toolbars and templates; utilize advanced and nested functions; audit and handle errors. Create pivot tables. Link multiple files; consolidate data. Use the Solver utility and Scenario Manager feature. Password protect, lock, hide and custom view data. View and edit macros in Visual Basic code.

Microsoft Word 2000 Level I Beginning

Create, edit and format text; run spell-check, and print. Enhance productivity with shortcuts and special characters. Get familiar with headers and footers, tables & columns.

PowerPoint 2000 Level I Beginning

Use the new features in PowerPoint 2000 to create business and Web presentations. Create and modify slides. Learn to use drawing tools, Clip Art and WordArt. Insert tables; create org charts and graphs. Select templates; modify the Slide Master. Add transitions and animation for special effects. Use the AutoContent Wizard, and learn how to prepare presentations for the Web.

PowerPoint 2000/XP Level II Advanced

Learn how to use outlines, design Slide Master templates, create and run custom shows, and use the Meeting Minder. Work with multimedia animations, sound effects and voice comments. Use advanced charting techniques and Web features to give your presentations in a variety of professional formats.

Introduction to Windows (2000 and XP)

Learn the fundamentals and terminology of your Personal Computer and the Microsoft Windows operating systems. Improve productivity; effectively use the My Computer and Recycle Bin icons, Taskbar, Windows Explorer, Desktop features. Learn how to print, use Help features. Learn to manage all those files and folders.

Outlook/XP Basic

Learn how to send and receive e-mail, manage messages, create signatures. Schedule single and recurring appointments and events. Create, send and manage meeting requests. Prioritize, assign and track all those tasks. Organize contact names, addresses, and other information.

Continuous Improvement

Theory of Constraints (TOC) I

1. Short introduction to production methods.
2. Computer simulations demonstrating why large batches cause problems, why balanced lines cause problems and how a bottleneck is a feature of any manufacturing plant.
3. Board simulation of the application of the TOC Production method to the operator plant.

Theory of Constraints II

Training takes the participant through systematic approach to solving the problems of operations – no matter what type of environment. Participants will:

1. Learn what lies at the roots of the problems of all production environments.
2. Understand the systematic process for quickly gaining incredible results from their current operation through the application of the Five Focusing Steps.
3. Understand why the words “Drum Buffer Rope” have been coined as another name for this solution.
4. Understand the need for aligning the organization to work in concert with the solution.

Agenda

1. The Process of Ongoing Improvement
2. What to Change
3. The problems
4. Analyzing the time and cost to address these problems
5. An experiment to validate that these are the problems we need to invest in
6. Understanding the underlying roots of the problems – a conflict!
7. Validating the roots – experiments to show the effects of measurements
8. What to Change To
9. The Five Focusing Steps
10. Applying the Five Focusing Steps to our Experiments
11. Aligning the release of material to the solution
12. Aligning the operational rules to support the solution
13. Aligning our control process with the solution
14. How to Cause the Change

15. Putting the logistical and organizational change into place.

Teamwork – Elements of Effective Teamwork

Identify the key elements that must exist for groups to become effective teams. Assess the effectiveness and impact of these elements on a team. Identify the skills a leader must demonstrate to develop the team. Fully utilize the resources of the team members. Select the proper decision making approach for team issues. Create an environment that promotes creative problem solving.

Workshop on the Evolution of Quality Management Systems, ISO 9000 – 2000 Revision

1: Quality Management Systems Overview (**Limited to 8 class/lab hours**)

2: Philosophy and Principles with the New Standards

3: Modifications to the ISO 9000 – Year 2000 Discussion

4: Panel Discussion – The Registrars Perspective

5: Implementation Strategies

6: Ancillary Standards, and What We Should Expect

Objectives:

- Achieve an understanding of the evolution of Quality Management Systems over the past 10 years.
- Gain an understanding of the anticipated changes in the ISO 9000 Standard.
- Envision the impact the changes in the Standard will have on your organization.
- Learn strategies for implementing the new changes within the organization.

Envision the impact of the ancillary Standards on the evolution of Quality Management Systems.

Manufacturing Skills (Industrial)

Frontline Worker Skills Associated with Product Creations and/or Assembly including:

Tyco Thermal Controls (1) Braiding, (2) Extruding, (3) Printing, and (4) Sparking Process Training

- Process technologies.
- Process steps and equipment capability.
- Commonly used terminology.
- Equipment safety requirements and concerns.
- Significant quality parameters.

Training will include all key steps the trainee must perform to produce a quality product at standard run rate and trainee must satisfactorily complete each of these key process steps in an efficient manner.